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=> s glyphosate
24 FILES SEARCHED...
L1 69836 GLYPHOSATE

=> s alkyletheramine
L2 93 ALKYLETHERAMINE

=> s l1 and l2
L3 69 L1 AND L2

=> dup rem l3
DUPLICATE IS NOT AVAILABLE IN 'FOREGE, GENBANK'.
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PROCESSING COMPLETED FOR L3
L4 44 DUP REM L3 (25 DUPLICATES REMOVED)
ANSWER '1' FROM FILE CAPLUS
ANSWERS '2-14' FROM FILE IFIPAT
ANSWERS '15-44' FROM FILE USPATFULL

=> d ti au abs so py 1-5 l4

L4 ANSWER 1 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN
TI Coformulation of an oil-soluble herbicide and a water-soluble herbicide
IN Jimoh, Ganiyu A.
AB A stable, liquid concentrate herbicidal emulsion composition comprises a water-soluble herbicide in a continuous aqueous phase and an oil-soluble herbicide in a discontinuous oil phase.
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
PY 2002
2003
2002
2002
2003
2004
2004
2004
2003

L4 ANSWER 2 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 1
TI GLYPHOSATE SALT HERBICIDAL COMPOSITION
INF Agbaje; Henry, Greensboro, NC, US
Eaton; David R., Kirkwood, MO, US
Graham; Jeffrey A., Chesterfield, MO, US
IN Agbaje Henry; Eaton David R; Graham Jeffrey A
AB A herbicidal composition comprises in aqueous solution a mixture of salts of glyphosate at a total glyphosate a.e. concentration not less than about 360 g/l, wherein (a) said glyphosate is in anionic form accompanied by low molecular weight nonamphiphilic cations in a total molar amount of about 100% to about 120% of the molar amount of said glyphosate; (b) said cations comprise potassium and propylammonium (e.g., isopropylammonium) cations in a mole ratio of about 70:30 to about 90:10; and (c) said potassium and propylammonium cations together constitute about 90 to 100 molar percent of all of said low molecular weight non-amphiphilic cations in the composition.
CLMN 21 2 Figure(s).
FIG. 1 is a graph showing measured viscosity at 20 degrees C. of mixtures of glyphosate potassium and IPA salts, by comparison with predicted viscosity based on viscosities of straight potassium salt and straight IPA salt.
FIG. 2 is a diagram of a continuous process illustrative of an embodiment of the present invention.

L4 ANSWER 3 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 2
TI HIGH-STRENGTH, LOW VISCOSITY HERBICIDAL FORMULATIONS OF GLYPHOSATE; AQUEOUS CONCENTRATE CONTAINING GLYPHOSATE

MONOMETHYLAMINE OR DIMETHYLAMINE SALT AND SURFACTANTS; REDUCED PACKAGING, SHIPPING AND HANDLING COSTS

INF Balijepalli; Sudhakar, Midland, MI, US
Tank; Holger, Zionsville, IN, US

IN Balijepalli Sudhakar; Tank Holger

AB This invention relates to a high-strength herbicidal formulation containing high concentrations of glyphosate monomethylamine or dimethylamine salt and one or more surfactants selected to enhance the herbicidal activity of the glyphosate salts. The formulations exhibit significantly lower viscosity at high concentrations.

CLMN 7

L4 ANSWER 4 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 3

TI ENHANCED METHOD OF KILLING WEEDS WITH GLYPHOSATE HERBICIDE;
COMPRISES MIXTURE OF CATIONIC SURFACTANTS

INF Becher; David Z., Creve Coeur, MO, US
Forbes; James C., Glenview, IL, US
Wideman; Al S., St. Louis, MO, US

IN Becher David Z; Forbes James C; Wideman Al S

AB A method is provided of enhancing the herbicidal activity of a glyphosate herbicide, comprising adding to the glyphosate herbicide a mixture of a first surfactant and a second surfactant at a weight ratio of total surfactant to glyphosate of about 1:30 to about 2:1, wherein the first surfactant has a chemical structure comprising a cationic or protonatable amino group and a C8-24 linear or branched, saturated or unsaturated hydrocarbyl group, and the second surfactant has the formula $(CH_2)_n COOM$ where R is a C7-23 linear or branched, saturated or unsaturated hydrocarbyl group, n is 1 to 4, M is hydrogen or a cationic counterion, and R' groups are each independently hydrogen, C1-4 alkyl or a group $(CH_2)_m COOM$ where m is 1 to 4 and M is as defined immediately above, with the proviso that no more than one R' group is such a group $(CH_2)_m COOM$; the weight ratio of the first to the second surfactant being about 1:10 to about 10:1. Also provided is a herbicidal composition prepared according to the above method. The first and second surfactants exhibit a synergistic interaction in enhancing herbicidal activity of the glyphosate herbicide.

NTE Subject to any Disclaimer, the term of this patent is extended or adjusted under 35 USC 154(b) by 495 days.

CLMN 32

L4 ANSWER 5 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 6

TI SURFACTANT ADJUVANTS USEFUL IN HERBICIDE COMPOSITIONS; COMBINING KNOWN SURFACTANCY, OR WETTING CHARACTERISTICS, OF SULFOSUCCINATE OR SULFOSUCCINAMATE-BASED SURFACTANTS, WITH THE PROVEN BIOEFFICIACY CHARACTERISTICS OF ALKOXYLATED AMINE-BASED SURFACTANTS.

INF Ashrawi; Samir S., Austin, TX, US
Elsik; Curtis Michael, Austin, TX, US
Kirby; Andrew Francis, Melbourne, AU
Lewis; David Charles, Austin, TX, US
Stridde; Howard Meyer, Georgetown, TX, US

IN Ashrawi Samir S; Elsik Curtis Michael; Kirby Andrew Francis (AU); Lewis David Charles; Stridde Howard Meyer

AB Surfactant adjuvants that improve the bioefficacy of herbicides by combining known surfactancy, or wetting characteristics, of sulfosuccinate or sulfosuccinamate-based surfactants, with the proven bioefficacy characteristics of alkoxyated amine-based surfactants. The surfactant adjuvants contain an amine-based surfactant, and a sulfosuccinate or sulfosuccinamate-based surfactant. The surfactant adjuvants are combined with herbicidal active ingredients, and optionally, one or more formulation aids to form herbicide compositions that have a reduced tendency to cause eye and skin irritation and can be used to control unwanted weeds or vegetation.

CLMN 38

=> d ti au abs so py 6-15 14

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'PY' IS NOT A VALID FORMAT

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L4 ANSWER 6 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 7
TI COFORMULATION OF AN OIL-SOLUBLE HERBICIDE AND A WATER-SOLUBLE HERBICIDE;
STABILIZING AMOUNT OF HYDROCHLORIC ACID, ALKALI METAL CHLORIDES AND/OR
AMMONIUM CHLORIDE TO INHIBIT DEGRADATION OF THE OIL-SOLUBLE HERBICIDE AND
A SURFACTANT AS AN EMULSIFIER APPLIED TO FOLIAGE

L4 ANSWER 7 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 8
TI PROCESS FOR MAKING A DOWNSTREAM PROCESSABLE AMMONIUM GLYPHOSATE
PASTE; REACTING PARTICULATE GLYPHOSATE ACID AND AMMONIA IN
WATER, EXOTHERMIC, EVAPORATION OF THE WATER TO FORM A PASTE; HERBICIDES

L4 ANSWER 8 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 15
TI STABLE CONCENTRATED PESTICIDAL SUSPENSION; GLYPHOSATE
HERBICIDE, IN SOLID PARTICULATE FORM, DISPERSED IN A LIQUID HERBICIDE
SUCH AS ACETOCHLOR; NONAQUEOUS; SILICA SUSPENSION AID

L4 ANSWER 9 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 16
TI PROCESS FOR MAKING AMMONIUM GLYPHOSATE POWDER; MIXING SOLID
PARTICULATE GLYPHOSATE ACID, WATER, AND AMMONIUM CARBONATE,
AMMONIUM BICARBONATE, AQUEOUS AMMONIA OR ANHYDROUS AMMONIA.

L4 ANSWER 10 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 17
TI MICROEMULSION COFORMULATION OF A GRAMINICIDE AND A WATER-SOLUBLE
HERBICIDE; SELECTIVE GRAMINICIDE OF THE CYCLOHEXENONE CLASS OR THE
ARYLOXYPHENOXYPROPIONATE CLASS

L4 ANSWER 11 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 21
TI COMPOSITION AND METHOD FOR TREATING PLANTS WITH EXOGENOUS CHEMICALS;
APPLYING EXOGENOUS CHEMICAL WITH ANTHRAQUINONE OR SUBSTITUTED
ANTHRAQUINONE ENHANCING AGENT TO ACHIEVE ENHANCED BIOLOGICAL
EFFECTIVENESS

L4 ANSWER 12 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 23
TI PROCESS AND COMPOSITIONS FOR ENHANCING RELIABILITY OF EXOGENOUS CHEMICAL
SUBSTANCES APPLIED TO PLANTS; USING MIXTURE OF HERBICIDE AND
PHENYL-SUBSTITUTED OLEFIN COMPOUND

L4 ANSWER 13 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN
TI SURFACTANT ADJUVANTS USEFUL IN HERBICIDE COMPOSITIONS; COMBINING KNOWN
SURFACTANCY, OR WETTING CHARACTERISTICS, OF SULFOSUCCINATE OR
SULFOSUCCINAMATE-BASED SURFACTANTS, WITH THE PROVEN BIOEFFICIACY
CHARACTERISTICS OF ALKOXYLATED AMINE-BASED SURFACTANTS.

L4 ANSWER 14 OF 44 IFIPAT COPYRIGHT 2007 IFI on STN
TI COFORMULATION OF AN OIL-SOLUBLE HERBICIDE AND A WATER-SOLUBLE HERBICIDE;
STABILIZING AMOUNT OF HYDROCHLORIC ACID, ALKALI METAL CHLORIDES AND/OR
AMMONIUM CHLORIDE TO INHIBIT DEGRADATION OF THE OIL-SOLUBLE HERBICIDE AND
A SURFACTANT AS AN EMULSIFIER APPLIED TO FOLIAGE

L4 ANSWER 15 OF 44 USPATFULL on STN DUPLICATE 4
TI Glyphosate resistant plants using hybrid promoter constructs

=> s quaternary(a) ammonium(a) surfactant

30 FILES SEARCHED...
L5 3764 QUATERNARY(A) AMMONIUM(A) SURFACTANT

=> s l1 and l5
32 FILES SEARCHED...
L6 97 L1 AND L5

=> dup rem l6
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L7 62 DUP REM L6 (35 DUPLICATES REMOVED)
ANSWER '1' FROM FILE AGRICOLA
ANSWERS '2-3' FROM FILE BIOSIS
ANSWERS '4-5' FROM FILE CAPLUS
ANSWERS '6-7' FROM FILE CROPU
ANSWERS '8-14' FROM FILE IFIPAT
ANSWERS '15-62' FROM FILE USPATFULL

=> d ti au abs so py 1-10 l7

L7 ANSWER 1 OF 62 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2007) on STN DUPLICATE 28
TI Foliar absorption of some glyphosate formulations and their efficacy on plants.
AU Laerke, P.E.; Streibig, J.C.
AB Uptake of various doses (0.27-4.06 g litre-1) of glyphosate acid formulated with various concentrations (0.27-5.42 g litre-1) of two polyethoxylated alcohol surfactants ('Genapol' T-150, 'Genapol' T-250) in wheat (*Triticum aestivum* L. cv. Ralle) 24 h after application was studied. Both surfactants greatly enhanced glyphosate uptake at concentrations up to 1.35 g litre-1. Uptake could be slightly further improved by 'Genapol' T-150 up to 5.42 g litre-1 while 'Genapol' T-250 at this high concentration antagonized uptake a little. Uptake of glyphosate-monoammonium formulated with a quaternary ammonium surfactant ('Trimao' (8PO)) in wheat and white mustard (*Sinapis alba* L. cv. Alba) was also studied. Uptake of glyphosate-monoammonium in wheat was enhanced at surfactant concentrations up to 1.35 g litre-1. Beyond this concentration uptake continued to increase slightly but not significantly. Generally, glyphosate-monoammonium formulated with 'Trimao' (8PO) was not taken up as extensively by mustard as by wheat, and the optimum surfactant concentration is probably higher on mustard. The optimal combinations of surfactant concentration and glyphosate dose based on uptake 24 h after application were used in a time-course study. Results from uptake studies were compared with the efficacy of similar formulations on wheat. The surfactant concentration range which gave the most pronounced effect on glyphosate uptake was found to be similar (0-1 g litre-1) in both studies. However, the surfactant concentration providing maximum herbicide uptake was found to be higher in the uptake study compared to the surfactant concentration providing optimal efficacy in the dose-response experiments. A dose rate of 0.5 g litre-1 of 'Tween' 20 (sorbitan monolaurate surfactant) improved efficacy of a formulation with an optimal mix of glyphosate-monoammonium and 'Trimao' (8PO). Ammonium sulfate (5.0 g litre-1) did not improve this formulation further.
SO Pesticide science, June 1995. Vol. 44, No. 2. p. 107-116
Publisher: Sussex : John Wiley and Sons Limited.
CODEN: PSSCBG; ISSN: 0031-613X
PY 1995
L7 ANSWER 2 OF 62 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 26

TI Herbicidal compositions including glyphosates and quaternary ammonium surfactants.

AU Bowey, K. G. [Inventor]; Baldwin, N. A. [Inventor]

SO Official Gazette of the United States Patent and Trademark Office Patents, (April 1, 1997) Vol. 1197, No. 1, pp. 368. print.
CODEN: OGUPE7. ISSN: 0098-1133.

PY 1997

L7 ANSWER 3 OF 62 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 27

TI Methods of using glyphosate compositions comprising alkoxyated quaternary ammonium surfactants.

AU Claude, J-P. [Inventor]; Khan, S. A. [Inventor]; Mitchell, R. W. [Inventor]

SO Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 7, 1995) Vol. 1180, No. 1, pp. 342. print.
CODEN: OGUPE7. ISSN: 0098-1133.

PY 1995

L7 ANSWER 4 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

TI Improved glyphosate herbicidal compositions.

IN Toussaint, Marc E.; Mitchell, Robert W.

AB The invention relates to a herbicidal composition comprising glyphosate herbicide and a quaternary ammonium surfactant
 $[R_3NR_1R_2R_nO(PO)_x(EO)_yH] + X^-$ [R = $R_6O(PO)_x'n(EO)_y'nH$; R₆ = C1-8 alkanetriyl; n = 1- 4; R₁ = C1-5 alkyl; R₂ = R₁ or $R_4O(PO)_u-(EO)_vH$; R₄ = C1-5 alkylene or (A)_m; A = $A_2O(PO)_u'm(EO)_v'mH$; A₂ = C1-8 alkanetriyl; m = 1-4; R₃ = C1-5 alkyl or $R_5O(PO)_w(EO)_zH$; R₅ = C1-5 alkylene or (B)_p; B = $B_3O(PO)_w'p(EO)_z'pH$; B₃ = C1-8 alkanetriyl; p = 1-4; EO = ethylene oxide; PO = propylene oxide; $X = x + \sum x'n + u + \sum u'm + w + \sum w'p = 15-35$; x, x'n, u, u'm, w and w'p = integer; $Y = y + \sum y'n + v + \sum v'm + z + \sum z'p = 0-15$; yr, y'n, v, v'm, z and z'p = integer; $\sum x'n$ = the sum of the propylene oxide of the individual R; $\sum u'm$ = the sum of the propylene oxide radicals of the individual A; $\sum w'p$ = the sum of the propylene oxide radicals of the individual B; $\sum y'n$ = the sum of the ethylene oxide radicals of the individual R; $\sum v'm$ = the sum of the ethylene oxide radicals of the individual A; $\sum z'p$ = the sum of the ethylene oxide radicals of the individual B; and X⁻ = anion]. The formulation is environmentally safe and has low hygroscopicity.

SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW

PY 1996
2002
2002
2002
2003
1996
1996
1996
1999
1998
1998

L7 ANSWER 5 OF 62 CAPLUS COPYRIGHT 2007 ACS on STN

TI Glyphosate compositions

IN Mitchell, Robert William; Bonnet, Marc Rene Edouard; Khan, Shuaib Ahmad; Toussaint, Marc Emile; Arnold, Kristin Anne

AB Solid or liquid glyphosate formulations contain a sorbitan fatty acid ester and another surfactant, such as an amine, quaternary ammonium salt, or alkylglycoside. The formulations show high herbicidal activity and rainfastness. A formulation comprised glyphosate isopropylamine salt, a propoxylated quaternary ammonium surfactant, and Tween 20, at a 2:0.9:0.1 ratio by weight

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

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1992
1997
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2002
1992

- L7 ANSWER 6 OF 62 CROPU COPYRIGHT 2007 THE THOMSON CORP on STN
- TI New tris(hydroxyalkyl)- (3-alkylsulfinylpropanamido) methane derivatives are surfactants useful in cosmetics, as detergents and as adjuvants in pharmaceutical and agricultural compositions, especially with glyphosate herbicide.
- IN Pucci B; Barthelemy P; Polidori A; Lacombe J M; Toussaint M E; Bonnet M R E
- AN 1999-84464 CROPU H G C
- AB The tris(hydroxyalkyl)- (3-alkylsulfinylpropanamido) methane compounds of formula (I) are claimed as new surfactants, useful in cosmetics, as detergents and as adjuvants in pharmaceutical and agricultural compositions, especially with glyphosate (GLY) in its acid form or as its derivatives thereof. Synthesis of compounds (I) was outlined; PMR and MS data were presented. In a greenhouse herbicidal bioassay, a composition comprising e.g. GLY monoisopropylammonium at 300-1200 g/ha, formulated as a spray mixture with e.g. trishydroxymethyl-(3-dodecylsulfinyl propanamido) methane (II) and demineralised water showed good activity (up to 100% control) compared with Roundup (GLY monoisopropylammonium) against Ipomoea purpurea, Raphanus sativus and Agropyron repens at 27 days after treatment.
- ABEX Compounds of formula (I) are claimed, where:-R = optionally substituted 2-40C alkyl; R1-R3 = lower alkyl; R4-R6 = H, halogen, alkali metal or alkali earth metal. The claimed weight ratio of glyphosate (expressed as glyphosate acid equivalent) to (I) is 1:5 to 10:1, preferably 1:2 to 5:1, especially 2:1. An adjuvant for agricultural compositions is claimed, comprising a compound of formula (I) together with anti-freeze agents, such as ethylene glycol polyethylene or polypropylene glycols and/or glycerol, dyes, thickening agents, anti-foam agents, e.g. silicone-based anti-foam agents, agents suitable for pH adjustment and certain surfactants, e.g non-ionic surfactants such as polyoxyethylene ethers or esters, sugar ethers, ethoxylated alkylamine surfactants, quaternary ammonium compounds (e.g. commercially available ethoxylated and/or propoxylated quaternary ammonium salts sold under the trade names Ethoquad and Emcol) and sorbitan esters. (12)
- L7 ANSWER 7 OF 62 CROPU COPYRIGHT 2007 THE THOMSON CORP on STN
- TI New, synergistic herbicidal and plant-growth regulating composition comprises glyphosate herbicide or its salts or acids and a quaternary ammonium compound, used to control and kill narrow leaf and/or broadleaf unwanted vegetation.
- IN Toussaint M E; Mitchell R W
- AN 1996-90405 CROPU C G H P S
- AB Improved glyphosate compositions are claimed. The preparations consist of glyphosate or its salts combined with a quaternary ammonium surfactant (I), in particular the oxypropylene derivative (1). Granular formulations were prepared, containing (e.g.) 77.7% glyphosate ammonium, 21.8% surfactant (1), and 0.5% water. The preparations were evaluated in toxicity tests and found to be moderately irritating to rabbit ocular tissue at 0.0700 g; a 48-hr EC50 value of 214 mg/l was seen in Daphnia

magna, and a 96-hr LC50 value of 658 mg/l in rainbow trout. Tank mixes (2:1 glyphosate:surfactant) were tested in greenhouse pot tests for herbicidal activity against Echinochloa erecta and Brassica napus compared to Roundup; all preparations were applied as 1080 g a.i./ha foliar spray. Performance of the tank mixes approached that of Roundup.

ABEX Composition comprises: (a) glyphosate or its salts or acids; and (b) a quaternary ammonium compound. $R = R_6O(PO)_x'n(EO)_y'nH$; $R_1 =$ alkyl; $R_2 =$ alkyl or $R_4O(PO)_u(O)_vH$; $R_3 =$ alkyl or $R_5O(PO)_w(EO)_zH$; $R_4 =$ alkylene or (A)m; $R_5 =$ alkylene or (B)p; $R_6 =$ alkanetriyl; $A = A_2O(PO)_u'm(EO)_v'mH$; $B = B_3O(PO)_w'm(EO)_z'mH$; $m, n, p = 1 - 4$; $A_2, B_3 =$ alkanetriyl; $EO =$ ethylene oxide radical; $PO =$ propylene oxide radical; degree of polymerization (sum of the various monomers) = 0-35; $X =$ agriculturally acceptable anion. The hygroscopicity of the surfactants was determined. (16)

L7 ANSWER 8 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 1
 TI AGROCHEMICAL COMPOSITIONS COMPRISING ALKYLENEDIOL-MODIFIED POLYSILOXANES
 INF Fleute-Schlachter; Ingo, Essen, DE
 Koenig; Frank, Gelsenkirchen, DE
 Lindsay; David, Chester, VA, US
 Sieverding; Ewald, St. Johann, DE
 Silber; Stefan, Krefeld, DE
 Simpelkamp; Joerg, Richmond, VA, US
 IN Fleute-Schlachter Ingo (DE); Koenig Frank (DE); Lindsay David; Sieverding
 Ewald (DE); Silber Stefan (DE); Simpelkamp Joerg
 AB Described are agrochemical compositions which comprise of one or more one agrochemical active ingredient(s) and alkylenediolmodified polysiloxanes of the general formula (I):

D R A W I N G

wherein R_1 are alkyl radicals having 1 to 4 carbon atoms or aryl radicals, wherein at least 80% of the radicals R_1 are methyl radicals, R_2 in the molecule are identical or different and can have the following definitions: a)

D R A W I N G

in which R_3 is a hydrogen or alkyl radical, R_4 is a hydrogen, alkyl or carboxyl radical, c is a number from 1 to 20, d is a number from 0 to 50, e is a number from 0 to 50 or b) correspond to R_1 , with the proviso that in the average molecule at least one radical R_2 has the definition (a), a is a number from 1 to 200; b is a number from 0 to 10; and optionally one or more other agrochemically acceptable ingredients. The agrochemical compositions of the invention have enhanced efficacy, enhanced hydrolytic stability and/or decreased foaming properties.

CLMN 20

L7 ANSWER 9 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 2
 TI GLYPHOSATE SALT HERBICIDAL COMPOSITION
 INF Agbaje; Henry, Greensboro, NC, US
 Eaton; David R., Kirkwood, MO, US
 Graham; Jeffrey A., Chesterfield, MO, US
 IN Agbaje Henry; Eaton David R; Graham Jeffrey A
 AB A herbicidal composition comprises in aqueous solution a mixture of salts of glyphosate at a total glyphosate a.e. concentration not less than about 360 g/l, wherein (a) said glyphosate is in anionic form accompanied by low molecular weight nonamphiphilic cations in a total molar amount of about 100% to about 120% of the molar amount of said glyphosate; (b) said cations comprise potassium and propylammonium (e.g., isopropylammonium) cations in a mole ratio of about 70:30 to about 90:10; and (c) said potassium and propylammonium cations together constitute about 90 to 100 molar percent of all of said low molecular weight non-amphiphilic cations in the

composition.

CLMN 21 2 Figure(s).

FIG. 1 is a graph showing measured viscosity at 20 degrees C. of mixtures of glyphosate potassium and IPA salts, by comparison with predicted viscosity based on viscosities of straight potassium salt and straight IPA salt.

FIG. 2 is a diagram of a continuous process illustrative of an embodiment of the present invention.

L7 ANSWER 10 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 3

TI HIGH-STRENGTH, LOW VISCOSITY HERBICIDAL FORMULATIONS OF GLYPHOSATE; AQUEOUS CONCENTRATE CONTAINING GLYPHOSATE MONOMETHYLAMINE OR DIMETHYLAMINE SALT AND SURFACTANTS; REDUCED PACKAGING, SHIPPING AND HANDLING COSTS

INF Balijepalli; Sudhakar, Midland, MI, US

Tank; Holger, Zionsville, IN, US

IN Balijepalli Sudhakar; Tank Holger

AB This invention relates to a high-strength herbicidal formulation containing high concentrations of glyphosate monomethylamine or dimethylamine salt and one or more surfactants selected to enhance the herbicidal activity of the glyphosate salts. The formulations exhibit significantly lower viscosity at high concentrations.

CLMN 7

=> d 11-20 17

L7 ANSWER 11 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 21

AN 03444224 IFIPAT;IFIUDB;IFICDB

TI COMPOSITION AND METHOD FOR TREATING PLANTS WITH EXOGENOUS CHEMICALS; APPLYING EXOGENOUS CHEMICAL WITH ANTHRAQUINONE OR SUBSTITUTED ANTHRAQUINONE ENHANCING AGENT TO ACHIEVE ENHANCED BIOLOGICAL EFFECTIVENESS

IN Brinker Ronald J; Gillespie Jane L; Raymond Peter J; Sandbrink Joseph J; Warner James M; Wideman Al S; Wright Daniel R

PA Monsanto Co (56920)

PI US 6172004 B1 20010109

AI US 1998-16101 19980130

PRAI US 1997-34887P 19970131 (Provisional)

FI US 6172004 20010109

DT Utility; REASSIGNED

FS CHEMICAL
GRANTED

ED Entered STN: 11 Jan 2001

Last Updated on STN: 8 Jul 2002

MRN 009280 MFN: 0495

009414 0592

012350 0224

CLMN 40

L7 ANSWER 12 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 23

AN 03346970 IFIPAT;IFIUDB;IFICDB

TI USE OF N-(PHOSPHONOMETHYL) GLYCINE AND DERIVATIVES THEREOF

IN Brants Ivo O (BE); Graham William (BE)

PA Monsanto Co (56920)

PI US 6083878 A 20000704 (CITED IN 002 LATER PATENTS)

WO 9736488 19971009

AI US 1999-155429 19990505

WO 1997-EP1443 19970321

19990505 PCT 371 date

19990505 PCT 102(e) date

PRAI EP 1996-870036 19960329

EP 1996-870094 19960716

FI US 6083878 20000704

DT Utility
FS CHEMICAL
GRANTED
ED Entered STN: 25 Jul 2000
Last Updated on STN: 8 Jul 2002
MRN 009969 MFN: 0455
CLMN 9

L7 ANSWER 13 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 24
AN 03275370 IFIPAT;IFIUDB;IFICDB
TI PROCESS AND COMPOSITIONS FOR ENHANCING RELIABILITY OF EXOGENOUS CHEMICAL
SUBSTANCES APPLIED TO PLANTS; USING MIXTURE OF HERBICIDE AND
PHENYL-SUBSTITUTED OLEFIN COMPOUND
IN Brinker Ronald Joseph; Gillespie Jane Laura; Raymond Peter Joseph;
Sandbrink Joseph Jude; Warner James Michael; Wideman Al Steven; Wright
Daniel Richard
PA Monsanto Co (56920)
PI US 6020287 A 20000201 (CITED IN 002 LATER PATENTS)
AI US 1998-16773 19980130
PRAI US 1997-34887P 19970131 (Provisional)
FI US 6020287 20000201
DT Utility; REASSIGNED; CERTIFICATE OF CORRECTION
CDAT 16 Apr 2002
FS CHEMICAL
GRANTED
ED Entered STN: 7 Feb 2000
Last Updated on STN: 8 Jul 2002
MRN 009226 MFN: 0711
012350 0224
CLMN 86

L7 ANSWER 14 OF 62 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 25
AN 03029340 IFIPAT;IFIUDB;IFICDB
TI GLYPHOSATE COMPOSITIONS AND THEIR USE; ALKOXYLATED
QUATERNARY AMMONIUM SURFACTANT; HERBICIDE
ADJUVANTS
IN Mitchell Robert William (BE); Toussaint Marc Emile (BE)
PA Monsanto Europe Sa BE (56922)
PI US 5798310 A 19980825 (CITED IN 001 LATER PATENTS)
WO 9629873 19961003
AI US 1996-737903 19961121
WO 1996-EP1171 19960319
19961121 PCT 371 date
19961121 PCT 102(e) date
PRAI EP 1995-870025 19950324
FI US 5798310 19980825
DT Utility; CERTIFICATE OF CORRECTION
CDAT 16 Mar 1999
FS CHEMICAL
GRANTED
ED Entered STN: 13 Oct 1998
Last Updated on STN: 8 Jul 2002
MRN 008846 MFN: 0132
CLMN 31
GI 3 Drawing Sheet(s), 3 Figure(s).

L7 ANSWER 15 OF 62 USPATFULL on STN DUPLICATE 4
AN 2005:275090 USPATFULL
TI HERBICIDAL COMPOSITIONS CONTAINING GLYPHOSATE AND BIPYRIDILIUM
IN Crockett, Ron P., Vancouver, WA, UNITED STATES
Dyszlewski, Andrew, St. Louis, MO, UNITED STATES
Kramer, Richard M., St. Louis, MO, UNITED STATES
Riego, Domingo C., Carmel, IN, UNITED STATES
Sandbrink, Joseph J., St. Louis, MO, UNITED STATES

Suttner, Donald L., Chesterfield, MO, UNITED STATES
Williamson, Dennis H., Morrisville, NC, UNITED STATES
Wright, Daniel R., St. Louis, MO, UNITED STATES

PI US 2005239652 A1 20051027
US 7008904 B2 20060307
AI US 2002-204094 A1 20010913 (10)
WO 2001-US28617 20010913
20021202 PCT 371 date
PRAI US 2000-232508P 20000913 (60)
DT Utility
FS APPLICATION
LN.CNT 6704
INCL INCLM: 504/128.000
NCL NCLM: 504/128.000
NCLS: 504/206.000; 504/235.000; 504/250.000
IC [7]
ICM A01N0057-18
IPCI A01N0057-18 [ICM,7]; A01N0057-00 [ICM,7,C*]
IPCI-2 A01N0043-40 [I,A]; A01N0043-34 [I,C*]; A01N0043-90 [I,A];
A01N0057-02 [I,A]; A01N0057-00 [I,C*]
IPCR A01N0057-00 [I,C*]; A01N0057-18 [I,A]; A01N0043-34 [I,C];
A01N0043-40 [I,A]; A01N0043-90 [I,C]; A01N0043-90 [I,A];
A01N0057-00 [I,C]; A01N0057-02 [I,A]

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 16 OF 62 USPATFULL on STN DUPLICATE 5
AN 2005:25709 USPATFULL
TI Glyphosate resistant plants using hybrid promoter constructs
IN Fincher, Karen L., Pacific, MO, UNITED STATES
Flasinski, Stanislaw, Chesterfield, MO, UNITED STATES
Wilkinson, Jack Q., Redwood City, CA, UNITED STATES
PA Monsanto Technology LLC (U.S. corporation)
PI US 2005022261 A1 20050127
US 7141722 B2 20061128
AI US 2004-920869 A1 20040818 (10)
RLI Continuation of Ser. No. US 2003-427169, filed on 1 May 2003, PENDING
Division of Ser. No. US 2000-737626, filed on 15 Dec 2000, GRANTED, Pat.
No. US 6660911
PRAI US 1999-171173P 19991216 (60)
DT Utility
FS APPLICATION
LN.CNT 3035
INCL INCLM: 800/278.000
INCLS: 435/189.000; 435/468.000; 435/419.000; 536/023.200
NCL NCLM: 800/300.000; 800/278.000
NCLS: 435/320.100; 435/413.000; 536/023.100; 536/023.200; 536/023.600;
536/024.100; 800/278.000; 435/189.000; 435/419.000; 435/468.000
IC [7]
ICM A01H001-00
ICS C12N015-82; C07H021-04; C12N009-02
IPCI A01H0001-00 [ICM,7]; C12N0015-82 [ICS,7]; C07H0021-04 [ICS,7];
C07H0021-00 [ICS,7,C*]; C12N0009-02 [ICS,7]
IPCI-2 A01H0005-00 [I,A]; A01H0001-00 [I,A]; C12N0015-00 [I,A];
C12N0005-04 [I,A]; C07H0021-02 [I,A]; C07H0021-04 [I,A];
C07H0021-00 [I,C*]
IPCR A01H0005-00 [I,C]; A01H0005-00 [I,A]; A01H0001-00 [I,C];
A01H0001-00 [I,A]; C07H0021-00 [I,C]; C07H0021-02 [I,A];
C07H0021-04 [I,A]; C12N0005-04 [I,C]; C12N0005-04 [I,A];
C12N0015-00 [I,C]; C12N0015-00 [I,A]; C12N0015-82 [I,C*];
C12N0015-82 [I,A]

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 17 OF 62 USPATFULL on STN DUPLICATE 6
AN 2005:6224 USPATFULL

TI Plants having high plant map values
 IN Fincher, Karen L., Pacific, MO, UNITED STATES
 Flasiński, Stanisław, Chesterfield, MO, UNITED STATES
 Wilkinson, Jack Q., Redwood City, CA, UNITED STATES
 PA Monsanto Technology LLC (U.S. corporation)
 PI US 2005005332 A1 20050106
 US 7112725 B2 20060926
 AI US 2004-909860 A1 20040802 (10)
 RLI Continuation of Ser. No. US 2003-427169, filed on 1 May 2003, PENDING
 Division of Ser. No. US 2000-737626, filed on 15 Dec 2000, GRANTED, Pat.
 No. US 6660911
 PRAI US 1999-171173P 19991216 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 3070
 INCL INCLM: 800/300.000
 INCLS: 435/320.100; 536/024.100; 435/468.000; 800/278.000
 NCL NCLM: 800/300.000
 NCLS: 435/320.100; 435/413.000; 536/023.100; 536/023.200; 536/023.600;
 536/024.100; 800/278.000; 435/468.000
 IC [7]
 ICM C12N015-82
 ICS C07H021-04; C12N015-87; C12N015-09; C12N015-63
 IPCI C12N0015-82 [ICM,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*];
 C12N0015-87 [ICS,7]; C12N0015-09 [ICS,7]; C12N0015-63 [ICS,7]
 IPCI-2 A01H0005-00 [I,A]; A01H0001-00 [I,A]; C12N0015-00 [I,A];
 C12N0005-04 [I,A]; C07H0021-02 [I,A]; C07H0021-04 [I,A];
 C07H0021-00 [I,C*]
 IPCR A01H0005-00 [I,C]; A01H0001-00 [I,A]; A01H0001-00 [I,C];
 A01H0001-00 [I,A]; C07H0021-00 [I,C]; C07H0021-02 [I,A];
 C07H0021-04 [I,A]; C12N0005-04 [I,C]; C12N0005-04 [I,A];
 C12N0015-00 [I,C]; C12N0015-00 [I,A]; C12N0015-82 [I,C*];
 C12N0015-82 [I,A]
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 18 OF 62 USPATFULL on STN DUPLICATE 7
 AN 2004:247953 USPATFULL
 TI Glyphosate composition
 IN Howat, Peter Dunlop, Canterbury, AUSTRALIA
 Hay, Phillip Maxwell, Melton, AUSTRALIA
 PI US 2004192552 A1 20040930
 US 6881707 B2 20050419
 AI US 2004-770378 A1 20040202 (10)
 RLI Continuation of Ser. No. WO 2002-AU1016, filed on 31 Jul 2002, UNKNOWN
 PRAI AU 2001-6822 20010803
 US 2001-311658P 20010810 (60)
 US 2001-338871P 20011207 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 892
 INCL INCLM: 504/206.000
 NCL NCLM: 504/206.000
 IC [7]
 ICM A01N057-18
 IPCI A01N0057-18 [ICM,7]; A01N0057-00 [ICM,7,C*]
 IPCI-2 A01N0057-02 [ICM,7]; A01N0057-00 [ICM,7,C*]
 IPCR A01N0057-00 [I,C*]; A01N0057-20 [I,A]
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 19 OF 62 USPATFULL on STN DUPLICATE 8
 AN 2003:283338 USPATFULL
 TI Novel plant expression constructs
 IN Fincher, Karen L., Pacific, MO, UNITED STATES
 Flasiński, Stanisław, Chesterfield, MO, UNITED STATES

Wilkinson, Jack Q., Redwood City, CA, UNITED STATES
 PA Monsanto Technology LLC (U.S. corporation)
 PI US 2003199682 A1 20031023
 US 6949696 B2 20050927
 AI US 2003-427180 A1 20030501 (10)
 RLI Continuation of Ser. No. US 2000-737626, filed on 15 Dec 2000, PENDING
 PRAI US 1999-171173P 19991216 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 3205
 INCL INCLM: 536/023.200
 INCLS: 800/278.000
 NCL NCLM: 800/300.000; 536/023.200
 NCLS: 435/320.100; 435/413.000; 536/023.100; 536/023.200; 536/023.600;
 536/024.100; 800/278.000
 IC [7]
 ICM C07H021-04
 ICS A01H001-00; C12N015-82
 IPCI C07H0021-04 [ICM,7]; C07H0021-00 [ICM,7,C*]; A01H0001-00 [ICS,7];
 C12N0015-82 [ICS,7]
 IPCI-2 A01H0005-00 [ICM,7]; A01H0001-00 [ICS,7]; C12N0015-00 [ICS,7];
 C12N0005-04 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]
 IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 20 OF 62 USPATFULL on STN DUPLICATE 9
 AN 2003:283337 USPATFULL
 TI Novel plant expression constructs
 IN Fincher, Karen L., Pacific, MO, UNITED STATES
 Flaszinski, Stanislaw, Chesterfield, MO, UNITED STATES
 Wilkinson, Jack Q., Redwood City, CA, UNITED STATES
 PA Monsanto Technology LLC (U.S. corporation)
 PI US 2003199681 A1 20031023
 US 6919495 B2 20050719
 AI US 2003-427169 A1 20030501 (10)
 RLI Division of Ser. No. US 2000-737626, filed on 15 Dec 2000, PENDING
 PRAI US 1999-171173P 19991216 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 3206
 INCL INCLM: 536/023.200
 INCLS: 800/278.000
 NCL NCLM: 800/300.000; 536/023.200
 NCLS: 435/320.100; 435/413.000; 536/023.100; 536/023.200; 536/023.600;
 536/024.100; 800/278.000
 IC [7]
 ICM C07H021-04
 ICS A01H001-00; C12N015-82
 IPCI C07H0021-04 [ICM,7]; C07H0021-00 [ICM,7,C*]; A01H0001-00 [ICS,7];
 C12N0015-82 [ICS,7]
 IPCI-2 A01H0005-00 [ICM,7]; A01H0001-00 [ICS,7]; C12N0015-00 [ICS,7];
 C12N0005-04 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]
 IPCR C12N0015-82 [I,C*]; C12N0015-82 [I,A]
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s amphoteric(a)surfactant
 L8 29292 AMPHOTERIC(A) SURFACTANT

=> s 11 and 18
 L9 204 L1 AND L8

=> s glyphosate near (monomethylamine or dimethylamine)
 MISSING OPERATOR 'NEAR (MONOMETHYL'

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s glyphosate near (monomethylamine) or (dimethylamine)
MISSING OPERATOR 'NEAR (MONOMETHYL'

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s glyphosate(n)monomethylamine
L10 6 GLYPHOSATE(N) MONOMETHYLAMINE

=> s monomethylamine
L11 4359 MONOMETHYLAMINE

=> s l1 and l11
32 FILES SEARCHED...
L12 16 L1 AND L11

=> s dimethylamine
L13 71775 DIMETHYLAMINE

=> s l1 and l13
L14 647 L1 AND L13

=> d his

(FILE 'HOME' ENTERED AT 14:34:35 ON 25 OCT 2007)

FILE 'AGRICOLA, ANTE, AQUALINE, BIOSIS, BIOTECHNO, CABA, CAPLUS, CBNB, CIN, CONFSCI, CROPB, CROPU, DISSABS, ENVIROENG, ESBIODASE, FOMAD, FOREGE, FROSTI, FSTA, GENBANK, IFIPAT, LIFESCI, NAPRALERT, NTIS, PASCAL, PHIC, PHIN, PROMT, SCISEARCH, USPATFULL, ...' ENTERED AT 14:36:28 ON 25 OCT 2007

L1 69836 S GLYPHOSATE
L2 93 S ALKYLETHERAMINE
L3 69 S L1 AND L2
L4 44 DUP REM L3 (25 DUPLICATES REMOVED)
ANSWER '1' FROM FILE CAPLUS
ANSWERS '2-14' FROM FILE IFIPAT
ANSWERS '15-44' FROM FILE USPATFULL
L5 3764 S QUATERNARY(A)AMMONIUM(A)SURFACTANT
L6 97 S L1 AND L5
L7 62 DUP REM L6 (35 DUPLICATES REMOVED)
ANSWER '1' FROM FILE AGRICOLA
ANSWERS '2-3' FROM FILE BIOSIS
ANSWERS '4-5' FROM FILE CAPLUS
ANSWERS '6-7' FROM FILE CROPU
ANSWERS '8-14' FROM FILE IFIPAT
ANSWERS '15-62' FROM FILE USPATFULL
L8 29292 S AMPHOTERIC(A)SURFACTANT
L9 204 S L1 AND L8
L10 6 S GLYPHOSATE(N)MONOMETHYLAMINE
L11 4359 S MONOMETHYLAMINE
L12 16 S L1 AND L11
L13 71775 S DIMETHYLAMINE
L14 647 S L1 AND L13

=> s l2 and l14
L15 23 L2 AND L14

=> dup rem l1
DUPLICATE IS NOT AVAILABLE IN 'FOREGE, GENBANK'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
69836 ANSWERS REQUESTED EXCEEDS MAXIMUM ALLOWED OF 50000
You may process up to 50,000 answers per command. Please try to

narrow your search until your resulting L# answer set is within the maximum number of answers.

=> dup rem l15

DUPLICATE IS NOT AVAILABLE IN 'FOREGE, GENBANK'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L15

L16 17 DUP REM L15 (6 DUPLICATES REMOVED)
ANSWER '1' FROM FILE IFIPAT
ANSWERS '2-17' FROM FILE USPATFULL

=> d ti au abs so py 1-10 l16

'SO' IS NOT A VALID FORMAT

'PY' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti au abs 1-10 l16

'1-10' IS NOT A VALID FORMAT

'L445' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):d ti au abs 1-10 l16

'D' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L16 ANSWER 1 OF 17 IFIPAT COPYRIGHT 2007 IFI on STN DUPLICATE 1
TI HIGH-STRENGTH, LOW VISCOSITY HERBICIDAL FORMULATIONS OF
GLYPHOSATE; AQUEOUS CONCENTRATE CONTAINING GLYPHOSATE
MONOMETHYLAMINE OR DIMETHYLAMINE SALT AND SURFACTANTS; REDUCED
PACKAGING, SHIPPING AND HANDLING COSTS

L16 ANSWER 2 OF 17 USPATFULL on STN DUPLICATE 2
TI Novel surfactants and formulations

L16 ANSWER 3 OF 17 USPATFULL on STN DUPLICATE 3
TI Stable liquid pesticide compositions

L16 ANSWER 4 OF 17 USPATFULL on STN DUPLICATE 4
TI Compounds, compositions, and methods of use for glyphosate
salts of ether amines

L16 ANSWER 5 OF 17 USPATFULL on STN DUPLICATE 5
TI Compact storage and shipping system for glyphosate herbicide

L16 ANSWER 6 OF 17 USPATFULL on STN DUPLICATE 6
TI Highly concentrated aqueous glyphosate compositions

L16 ANSWER 7 OF 17 USPATFULL on STN
TI Herbicide compatibility improvement

L16 ANSWER 8 OF 17 USPATFULL on STN
TI Glyphosate salt herbicidal composition

L16 ANSWER 9 OF 17 USPATFULL on STN
TI Novel surfactants and formulations

L16 ANSWER 10 OF 17 USPATFULL on STN
TI Pesticide concentrates containing etheramine surfactants

=> d ti au abs so py 1-10 l15

'SO' IS NOT A VALID FORMAT

'PY' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):abs ti au

L15 ANSWER 1 OF 23 IFIPAT COPYRIGHT 2007 IFI on STN

AB This invention relates to a high-strength herbicidal formulation containing high concentrations of glyphosate monomethylamine or dimethylamine salt and one or more surfactants selected to enhance the herbicidal activity of the glyphosate salts. The formulations exhibit significantly lower viscosity at high concentrations.

CLMN 7

TI HIGH-STRENGTH, LOW VISCOSITY HERBICIDAL FORMULATIONS OF GLYPHOSATE; AQUEOUS CONCENTRATE CONTAINING GLYPHOSATE MONOMETHYLAMINE OR DIMETHYLAMINE SALT AND SURFACTANTS; REDUCED PACKAGING, SHIPPING AND HANDLING COSTS

INF Balijepalli; Sudhakar, Midland, MI, US

Tank; Holger, Zionsville, IN, US

IN Balijepalli Sudhakar; Tank Holger

L15 ANSWER 2 OF 23 USPATFULL on STN

AB A herbicidal composition comprises an aqueous solution of one to a plurality of salts of glyphosate at a total glyphosate a.e. concentration not less than about 360 g/l, wherein (a) said glyphosate is in anionic form accompanied by low molecular weight non-amphiphilic cations in a total molar amount of about 110% to about 120% of the molar amount of said glyphosate; and (b) a major amount to substantially all of the low molecular weight non-amphiphilic cations are potassium cations. The composition exhibits improved tank-mix compatibility with a phenoxy-type herbicide salt formulation by comparison with an otherwise similar composition having a lower molar amount of said low molecular weight non-amphiphilic cations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Herbicide compatibility improvement

IN Wright, Daniel R., St. Louis, MO, UNITED STATES

Hemminghaus, John W., Crestwood, MO, UNITED STATES

Eaton, David R., Kirkwood, MO, UNITED STATES

L15 ANSWER 3 OF 23 USPATFULL on STN

AB A herbicidal composition comprises in aqueous solution a mixture of salts of glyphosate at a total glyphosate a.e. concentration not less than about 360 g/l, wherein (a) said glyphosate is in anionic form accompanied by low molecular weight non-amphiphilic cations in a total molar amount of about 100% to about 120% of the molar amount of said glyphosate; (b) said cations comprise potassium and propylammonium (e.g., isopropylammonium) cations in a mole ratio of about 70:30 to about 90:10; and (c) said potassium and propylammonium cations together constitute about 90 to 100 molar percent of all of said low molecular weight non-amphiphilic cations in the composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Glyphosate salt herbicidal composition

IN Eaton, David R., Kirkwood, MO, UNITED STATES

Graham, Jeffrey A., Chesterfield, MO, UNITED STATES
Agbaje, Henry, Greensboro, NC, UNITED STATES

L15 ANSWER 4 OF 23 USPATFULL on STN

AB A herbicidal composition is provided comprising an aqueous solution of N-phosphonomethylglycine, predominantly in the form of the potassium salt thereof, at a concentration of at least 300 g a.e./l of the composition; and a surfactant component in solution or stable suspension, emulsion, or dispersion in the water, comprising one or more surfactants in a total amount of about 20 to about 300 g/l of the composition, wherein the composition has a viscosity of less than about 250 centipoise at 0° C. or a Gardner color value less than 10.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Novel surfactants and formulations

IN Lennon, Patrick J., Webster Groves, MO, UNITED STATES
Chen, Xiangyang, Chesterfield, MO, UNITED STATES
Arhancet, Graciela B., Creve Coeur, MO, UNITED STATES
Glaenger, Jeanette A., University City, MO, UNITED STATES
Gillespie, Jane L., St. Louis, MO, UNITED STATES
Graham, Jeffrey A., Wildwood, MO, UNITED STATES
Becher, David Z., St. Louis, MO, UNITED STATES
Wright, Daniel R., St. Louis, MO, UNITED STATES
Agbaje, Henry E., St. Louis, MO, UNITED STATES
Xu, Xiaodong C., Valley Park, MO, UNITED STATES
Abraham, William, Wildwood, MO, UNITED STATES
Brinker, Ronald J., Ellisville, MO, UNITED STATES
Pallas, Norman R., Florissant, MO, UNITED STATES
Wideman, Al S., St. Louis, MO, UNITED STATES
Mahoney, Martin D., St. Peters, MO, UNITED STATES
Henke, Susan L., Webster Groves, MO, UNITED STATES

L15 ANSWER 5 OF 23 USPATFULL on STN

AB This invention relates to a high-strength herbicidal formulation containing high concentrations of glyphosate monomethylamine or dimethylamine salt and one or more surfactants selected to enhance the herbicidal activity of the glyphosate salts. The formulations exhibit significantly lower viscosity at high concentrations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI High-strength, low viscosity herbicidal formulations of glyphosate

IN Tank, Holger, Zionsville, IN, UNITED STATES
Balijepalli, Sudhakar, Midland, MI, UNITED STATES

L15 ANSWER 6 OF 23 USPATFULL on STN

AB A herbicidal composition is provided comprising an aqueous solution of N-phosphonomethylglycine, predominantly in the form of the potassium salt thereof, at a concentration of at least 300 g a.e./l of the composition; and a surfactant component in solution or stable suspension, emulsion, or dispersion in the water, comprising one or more surfactants in a total amount of about 20 to about 300 g/l of the composition, wherein the composition has a viscosity of less than about 250 centipoise at 0° C. or a Gardner color value less than 10.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Novel surfactants and formulations

IN Lennon, Patrick J., Webster, MO, UNITED STATES
Chen, Xiangyang, Chesterfield, MO, UNITED STATES
Arhancet, Graciela B., Creve Coeur, MO, UNITED STATES
Glaenger, Jeanette A., University City, MO, UNITED STATES
Gillespie, Jane L., St. Louis, MO, UNITED STATES
Graham, Jeffrey A., Wildwood, MO, UNITED STATES

Becher, David Z., Point Court, MO, UNITED STATES
Wright, Daniel R., St. Louis, MO, UNITED STATES
Agbaje, Henry E., St. Louis, MO, UNITED STATES
Xu, Xiaodong C., Valley Park, MO, UNITED STATES
Abraham, William, Wildwood, MO, UNITED STATES
Brinker, Ronald J., Ellisville, MO, UNITED STATES
Pallas, Norman R., Florissant, MO, UNITED STATES
Wideman, Al S., St. Louis, MO, UNITED STATES
Mahoney, Martin D., St. Peters, MO, UNITED STATES
Henke, Susan L., Webster Groves, MO, UNITED STATES

L15 ANSWER 7 OF 23 USPATFULL on STN

AB Diamines or other polyamines increase the compatibility of ether amine surfactants with pesticide formulations such as those containing glyphosate or a salt or ester thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Pesticide concentrates containing etheramine surfactants

IN Agbaje, Henry E., St. Louis, MO, UNITED STATES
Becher, David Z., St. Louis, MO, UNITED STATES
Bates, Chris, Ballwin, MO, UNITED STATES
Seifert-Higgins, Simone, Pacific, MO, UNITED STATES
Brinker, Ronald J., Ellisville, MO, UNITED STATES

L15 ANSWER 8 OF 23 USPATFULL on STN

AB Aqueous pesticidal concentrate emulsions or microemulsions are described which are storage stable after exposure to temperatures ranging from 60° C. to -20° C.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Stable liquid pesticide compositions

IN Pallas, Norman R., Florissant, MO, UNITED STATES
Gillespie, Jane L., St. Louis, MO, UNITED STATES
Singh, Lata, Ellisville, MO, UNITED STATES
Xu, Xiaodong C., Valley Park, MO, UNITED STATES

L15 ANSWER 9 OF 23 USPATFULL on STN

AB The present invention describes glyphosate salts of ether amines as compounds and compositions, including their methods of use. The compounds include glyphosate salts of the formula (I):
 $Z-CH_2-NH-CH_2-POR_{1R_2}$ (I), wherein Z is COOH, COSH, COCl, COBr, COF, COI, or COR₃; R₁, R₂, and R₃ are each independently OH or OR₄ such that at least one of R₁, R₂, and R₃ are OR₄; and R₄ is an ether amine salt-forming cation of the formula (II): H_{4N}-R₅-O-R₆ (II), wherein R₅ and R₆ are each independently C₁-C₆ alkyl, C₂-C₆ alkene, or C₂-C₆ alkyne. The compositions included herein contain at least the above-described glyphosate salt in combination with a carrier. This composition is useful in methods to inhibit the growth of unwanted plants by contacting the plant with an herbicidally effective amount of the composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Compounds, compositions, and methods of use for glyphosate salts of ether amines

IN Jones, Rita S., Apex, NC, UNITED STATES

L15 ANSWER 10 OF 23 USPATFULL on STN

AB A plant treatment composition for application of an anionic exogenous chemical substance such as glyphosate to foliage of a plant is provided. The composition comprises, in addition to the exogenous chemical substance, one or more amine compound(s) each having a number n of protonatable amino groups, n being at least 1, and having the formula

(I)

R--NR--((CH.sub.2).sub.p--CHR.sup.4--NR).sub.q--R (I)

wherein q is an integer of 0 to 9, each p is independently an integer of 1 to 5, each R.sup.4 group is independently hydrogen or a C.sub.1-5 alkyl group, and R groups are independently selected from hydrogen, C.sub.1-5 hydrocarbyl groups and linear or branched, saturated or unsaturated C.sub.6-22 hydrocarbyl or acyl chains that are (a) unsubstituted or substituted at one or a plurality of carbon atoms with a functional group independently selected from hydroxyl, carboxy, carbamyl, mercapto and cyano groups and (b) uninterrupted or interrupted by one or a plurality of functional linkages independently selected from ether, thioether, sulfoxide, ester, thioester and amide linkages, and terminated by an uninterrupted hydrocarbyl segment having at least 6 carbon atoms; with the proviso that one to three R groups are such C.sub.6-22 hydrocarbyl or acyl chains, of which at least one is so substituted and/or interrupted. The exogenous chemical substance and amine compound(s) of formula (I) are dissolved or dispersed in an agronomically acceptable liquid carrier, preferably water. Also provided are a liquid concentrate composition which, upon dilution with water, forms a plant treatment composition, and a process for making such a liquid concentrate composition. Plant treatment compositions of the invention are useful for eliciting a biological activity, for example herbicidal activity, in a plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Process and compositions promoting biological effectiveness of exogenous chemical substances in plants

IN Bryson, Nathan J., Millery, FRANCE
Soula, Olivier, Lyon, FRANCE
Lemerancier, Alain J. L., St. Bonnet de Mure, FRANCE
Meyrueix, Remi, Lyon, FRANCE
Soula, Gerard G., Meyzieux, FRANCE

=> d his

(FILE 'HOME' ENTERED AT 14:34:35 ON 25 OCT 2007)

FILE 'AGRICOLA, ANTE, AQUALINE, BIOSIS, BIOTECHNO, CABA, CAPLUS, CBNB, CIN, CONFSCI, CROPB, CROPU, DISSABS, ENVIROENG, ESBIODASE, FOMAD, FOREGE, FROSTI, FSTA, GENBANK, IFIPAT, LIFESCI, NAPRALERT, NTIS, PASCAL, PHIC, PHIN, PROMT, SCISEARCH, USPATFULL, ...' ENTERED AT 14:36:28 ON 25 OCT 2007

L1 69836 S GLYPHOSATE
L2 93 S ALKYLETHERAMINE
L3 69 S L1 AND L2
L4 44 DUP REM L3 (25 DUPLICATES REMOVED)
ANSWER '1' FROM FILE CAPLUS
ANSWERS '2-14' FROM FILE IFIPAT
ANSWERS '15-44' FROM FILE USPATFULL
L5 3764 S QUATERNARY(A)AMMONIUM(A)SURFACTANT
L6 97 S L1 AND L5
L7 62 DUP REM L6 (35 DUPLICATES REMOVED)
ANSWER '1' FROM FILE AGRICOLA
ANSWERS '2-3' FROM FILE BIOSIS
ANSWERS '4-5' FROM FILE CAPLUS
ANSWERS '6-7' FROM FILE CROPU
ANSWERS '8-14' FROM FILE IFIPAT
ANSWERS '15-62' FROM FILE USPATFULL
L8 29292 S AMPHOTERIC(A)SURFACTANT
L9 204 S L1 AND L8
L10 6 S GLYPHOSATE(N)MONOMETHYLAMINE
L11 4359 S MONOMETHYLAMINE

L12 16 S L1 AND L11
L13 71775 S DIMETHYLAMINE
L14 647 S L1 AND L13
L15 23 S L2 AND L14
L16 17 DUP REM L15 (6 DUPLICATES REMOVED)
ANSWER '1' FROM FILE IFIPAT
ANSWERS '2-17' FROM FILE USPATFULL

=> s 15 and 113
L17 431 L5 AND L13

=> s 15 and 114
L18 37 L5 AND L14

=> d ti au abs so py 1-10
'SO' IS NOT A VALID FORMAT
'PY' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files. Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti au abs

L18 ANSWER 1 OF 37 IFIPAT COPYRIGHT 2007 IFI on STN
TI HIGH-STRENGTH, LOW VISCOSITY HERBICIDAL FORMULATIONS OF
GLYPHOSATE; AQUEOUS CONCENTRATE CONTAINING GLYPHOSATE
MONOMETHYLAMINE OR DIMETHYLAMINE SALT AND SURFACTANTS; REDUCED
PACKAGING, SHIPPING AND HANDLING COSTS
INF Balijepalli; Sudhakar, Midland, MI, US
Tank; Holger, Zionsville, IN, US
IN Balijepalli Sudhakar; Tank Holger
AB This invention relates to a high-strength herbicidal formulation
containing high concentrations of glyphosate monomethylamine or
dimethylamine salt and one or more surfactants selected to
enhance the herbicidal activity of the glyphosate salts. The
formulations exhibit significantly lower viscosity at high
concentrations.
CLMN 7

L18 ANSWER 2 OF 37 USPATFULL on STN
TI Herbicide compatibility improvement
IN Wright, Daniel R., St. Louis, MO, UNITED STATES
Hemminghaus, John W., Crestwood, MO, UNITED STATES
Eaton, David R., Kirkwood, MO, UNITED STATES
AB A herbicidal composition comprises an aqueous solution of one to a
plurality of salts of glyphosate at a total glyphosate
a.e. concentration not less than about 360 g/l, wherein (a) said
glyphosate is in anionic form accompanied by low molecular
weight non-amphiphilic cations in a total molar amount of about 110% to
about 120% of the molar amount of said glyphosate; and (b) a
major amount to substantially all of the low molecular weight
non-amphiphilic cations are potassium cations. The composition exhibits
improved tank-mix compatibility with a phenoxy-type herbicide salt
formulation by comparison with an otherwise similar composition having a
lower molar amount of said low molecular weight non-amphiphilic cations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 3 OF 37 USPATFULL on STN
TI Herbicidal compositions containing glyphosate bipyridilium
IN Crockett, Ron P., Vancouver, WA, UNITED STATES
Dyszlewski, Andrew, St. Louis, MO, UNITED STATES
Kramer, Richard M., Chesterfield, MO, UNITED STATES
Riego, Domingo C., Carmel, IN, UNITED STATES

Sandbrink, Joseph J., St. Louis, MO, UNITED STATES
Suttner, Donald L., Chesterfield, MO, UNITED STATES
Williamson, Dennis H., Morrisville, NC, UNITED STATES
Wright, Daniel R., St. Louis, MO, UNITED STATES

AB Herbicidal compositions are provided which cause rapid symptomology while delivering long term control of regrowth of plants. The herbicidal compositions comprise N-phosphonomethylglycine or a herbicidal derivative thereof, a bipyridilium or a herbicidal derivative thereof, and at least one surfactant. A herbicidal spray composition is preparable from a particulate solid concentrate or a liquid concentrate. Also provided is a method for killing or controlling the growth of plants comprising the step of contacting the foliage of said plants with an aqueous herbicidal composition of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 4 OF 37 USPATFULL on STN

TI Glyphosate salt herbicidal composition

IN Eaton, David R., Kirkwood, MO, UNITED STATES
Graham, Jeffrey A., Chesterfield, MO, UNITED STATES
Agbaje, Henry, Greensboro, NC, UNITED STATES

AB A herbicidal composition comprises in aqueous solution a mixture of salts of glyphosate at a total glyphosate a.e. concentration not less than about 360 g/l, wherein (a) said glyphosate is in anionic form accompanied by low molecular weight non-amphiphilic cations in a total molar amount of about 100% to about 120% of the molar amount of said glyphosate; (b) said cations comprise potassium and propylammonium (e.g., isopropylammonium) cations in a mole ratio of about 70:30 to about 90:10; and (c) said potassium and propylammonium cations together constitute about 90 to 100 molar percent of all of said low molecular weight non-amphiphilic cations in the composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 5 OF 37 USPATFULL on STN

TI Pesticide compositions containing oxalic acid

IN Xu, Xiaodong C., Valley Park, MO, UNITED STATES
Brinker, Ronald J., Ellisville, MO, UNITED STATES
Reynolds, Tracey L., Ballwin, MO, UNITED STATES
Abraham, William, Wildwood, MO, UNITED STATES
Graham, Jeffrey A., Wildwood, MO, UNITED STATES

AB Pesticidal concentrate and spray compositions are described which exhibit enhanced efficacy due to the addition thereto of a compound which increases cell membrane permeability, suppresses oxidative burst, or increases expression of hydroxyproline-rich glycoproteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 6 OF 37 USPATFULL on STN

TI Herbicidal compositions containing N-phosphonomethyl glycine and an auxin herbicide

IN Becher, David Z., St. Louis, MO, UNITED STATES
Agbaje, Henry E., St. Louis, MO, UNITED STATES
Travers, Jeffrey N., Chesterfield, MO, UNITED STATES
Brinker, Ronald J., Ellisville, MO, UNITED STATES
Xu, Xiaodong C., Valley Park, MO, UNITED STATES
Ottens, Timothy S., Stanton, MO, UNITED STATES

AB Herbicidal compositions are provided which cause rapid symptomology while delivering long term control of regrowth of plants. The herbicidal concentrate compositions comprise N-phosphonomethylglycine or a herbicidal derivative thereof, an auxin herbicide or a herbicidal derivative thereof, and at least one surfactant. Also provided is a method for killing or controlling the growth of certain plants by

contacting the foliage of the plants with the diluted concentrate composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 7 OF 37 USPATFULL on STN

TI Novel surfactants and formulations

IN Lennon, Patrick J., Webster Groves, MO, UNITED STATES
Chen, Xiangyang, Chesterfield, MO, UNITED STATES
Arhancet, Graciela B., Creve Coeur, MO, UNITED STATES
Glaenzer, Jeanette A., University City, MO, UNITED STATES
Gillespie, Jane L., St. Louis, MO, UNITED STATES
Graham, Jeffrey A., Wildwood, MO, UNITED STATES
Becher, David Z., St. Louis, MO, UNITED STATES
Wright, Daniel R., St. Louis, MO, UNITED STATES
Agbaje, Henry E., St. Louis, MO, UNITED STATES
Xu, Xiaodong C., Valley Park, MO, UNITED STATES
Abraham, William, Wildwood, MO, UNITED STATES
Brinker, Ronald J., Ellisville, MO, UNITED STATES
Pallas, Norman R., Florissant, MO, UNITED STATES
Wideman, Al S., St. Louis, MO, UNITED STATES
Mahoney, Martin D., St. Peters, MO, UNITED STATES
Henke, Susan L., Webster Groves, MO, UNITED STATES

AB A herbicidal composition is provided comprising an aqueous solution of N-phosphonomethylglycine, predominantly in the form of the potassium salt thereof, at a concentration of at least 300 g a.e./l of the composition; and a surfactant component in solution or stable suspension, emulsion, or dispersion in the water, comprising one or more surfactants in a total amount of about 20 to about 300 g/l of the composition, wherein the composition has a viscosity of less than about 250 centipoise at 0° C. or a Gardner color value less than 10.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 8 OF 37 USPATFULL on STN

TI HERBICIDAL COMPOSITIONS CONTAINING GLYPHOSATE AND BIPYRIDILIUM

IN Crockett, Ron P., Vancouver, WA, UNITED STATES
Dyszlewski, Andrew, St. Louis, MO, UNITED STATES
Kramer, Richard M., St. Louis, MO, UNITED STATES
Riego, Domingo C., Carmel, IN, UNITED STATES
Sandbrink, Joseph J., St. Louis, MO, UNITED STATES
Suttner, Donald L., Chesterfield, MO, UNITED STATES
Williamson, Dennis H., Morrisville, NC, UNITED STATES
Wright, Daniel R., St. Louis, MO, UNITED STATES

AB Herbicidal compositions are provided which cause rapid symptomology while delivering long term control of re-growth of plants. The herbicidal compositions comprise N-phosphonomethylglycine or a herbicidal derivative thereof a bipyridilium or a herbicidal derivative thereof, and at least one surfactant. A herbicidal spray composition is preparable from a particulate solid concentrate or a liquid concentrate. Also provided is a method for killing or controlling the growth of plants comprising the step of contacting the foliage of said plants with an aqueous herbicidal composition of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 9 OF 37 USPATFULL on STN

TI Use of a quaternary ammonium glycoside surfactant as an adjuvant for fertilizers or pesticides

IN Gustavsson, Bodil, Stora Hoga, SWEDEN

AB The present invention relates to the use of a quaternary ammonium glycoside surfactant as an adjuvant for fertilizers or pesticides, such as herbicides. The surfactant contains at least one hydrocarbon group with 6-24 carbon atoms and at least one quaternary ammonium group where

at least one substituent is an alkyleneoxy containing group which is connected to a saccharide residue by a glycosidic bond. Also compositions containing pesticides or fertilizers are described. These quaternary ammonium glycoside surfactants have an essentially improved biodegradability. They also improve the uptake and efficacy of fertilizers and herbicides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L18 ANSWER 10 OF 37 USPATFULL on STN

TI High-strength, low viscosity herbicidal formulations of glyphosate

IN Tank, Holger, Zionsville, IN, UNITED STATES

Balijepalli, Sudhakar, Midland, MI, UNITED STATES

AB This invention relates to a high-strength herbicidal formulation containing high concentrations of glyphosate monomethylamine or dimethylamine salt and one or more surfactants selected to enhance the herbicidal activity of the glyphosate salts. The formulations exhibit significantly lower viscosity at high concentrations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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